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IS 11455-1-1 (1985): Outline dimensions of transformers and inductors for use in telecommunication and electronic equipment, Part 1: Transformers, inductors using YEI-1 laminations, Section 1: Universel mounting [LITD 5: Semiconductor and Other Electronic Components and Devices]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard

OUTLINE DIMENSIONS OF TRANSFORMERS AND INDUCTORS FOR USE IN TELECOMMUNICATION AND ELECTRONIC EQUIPMENT

PART 1 TRANSFORMERS AND INDUCTORS USING YEI-1 LAMINATIONS

Section 1 Universal Mounting

1. Scope — This standard specifies the outline dimensions of transformers and inductors, using E and I Laminations, built for universal mounting.

2. Laminations — For the purpose of this specification, the laminations shall conform to the dimensions of Type YEI-1, as prescribed in relevant Indian Standards.

3. General — The styles and mounting methods are based upon proven methods of assembly. In particular, dimensions are established which allow for the use of safety type coil formers, where required, on all assembly styles.

On the larger sizes of lamination, a range of stack heights allows continuous variation of power rating. The increment of stack height follows the R10 series of preferred numbers [see IS : 1076-1967 'Preferred numbers (first revision)'], as a multiple of the width of the centre limb of the lamination. The stack height is shown as nominal and is open to small variations within the proposed outline dimensions and fixing centres. A suffix is used to designate the appropriate stack size, as shown below:

Suffix Letter	Multiple of Centre Leg of Lamination
<i>a</i>	0.5
<i>b</i>	0.63
<i>c</i>	0.8
<i>d</i>	1.0 (that is square stack)
<i>e</i>	1.25
<i>f</i>	1.6
<i>g</i>	2.0

The data provided in 4 give the following dimensions:

Over all dimensions	(A, B, C)
Positioning of mounting holes	(D1, D2, D3,)
Fixing hole size	(G)
Stack size	(S)

3.1 Tolerances — The dimensions, except where indicated as maximum or nominal shall have tolerances in accordance with the requirements of IS : 919 (Part I)-1963 'Recommendations for limits and fits for engineering : Part 1 General engineering (first revision)'. The appropriate tolerance is shown at the head of each column of dimensions in the Table 1.

4. Universal-Mounting Style

4.1 The dimensions specified in Table I correspond to assemblies using laminations YEI 1-14 to YEI 1-50 in accordance with the outline drawing of Fig 1.

The magnetic axis may be vertical or horizontal.

TABLE 1 DIMENSIONS FOR UNIVERSAL MOUNTING STYLE

(Clause 4.1)

All dimensions in millimetres.

Core Designation	S nom	A Max	B Max	C Max	D1 ±IT12	D2 ±IT12	D3 ±IT12	G Max
YEI 1-14 d	14	47	40	34	35	28	26	3.5
YEI 1-16 d	16	53	45	38	40	32	28	3.5
YEI 1-18 d	18	60	51	43	45	36	30	3.5
YEI 1-20 d	20	66	56	48	50	46	32	3.5
YEI 1-22 c	18	72	61	49	55	44	38	4.5
1-22 d	22			53			42	
1-22 e	28			59			48	
1-22 f	35			66			55	
YEI 1-25 c	20	81	69	55	62.5	50	40	4.5
1-25 d	25			60			45	
1-25 e	31			66			51	
1-25 f	40			75			60	
YEI 1-28 d	28	90	76	67	70	56	48	4.5
1-28 e	35			74			55	
1-28 f	45			84			65	
1-28 g	56			95			76	
YEI 1-32 d	32	103	87	77	80	64	57	5.5
1-32 e	40			85			65	
1-32 f	51			96			76	
1-32 g	64			109			89	
YEI 1-36 d	36	115	97	86	90	72	61	5.5
1-36 e	45			95			70	
1-36 f	58			108			83	
1-36 g	72			122			97	
YEI 1-40 d	40	127	107	96	100	80	70	7
1-40 e	50			106			80	
1-40 f	64			120			94	
1-40 g	80			136			110	
YEI 1-50 d	50	160	136	120	125	100	90	9
1-50 e	63			133			103	
1-50 f	80			150			120	
1-50 g	100			170			140	

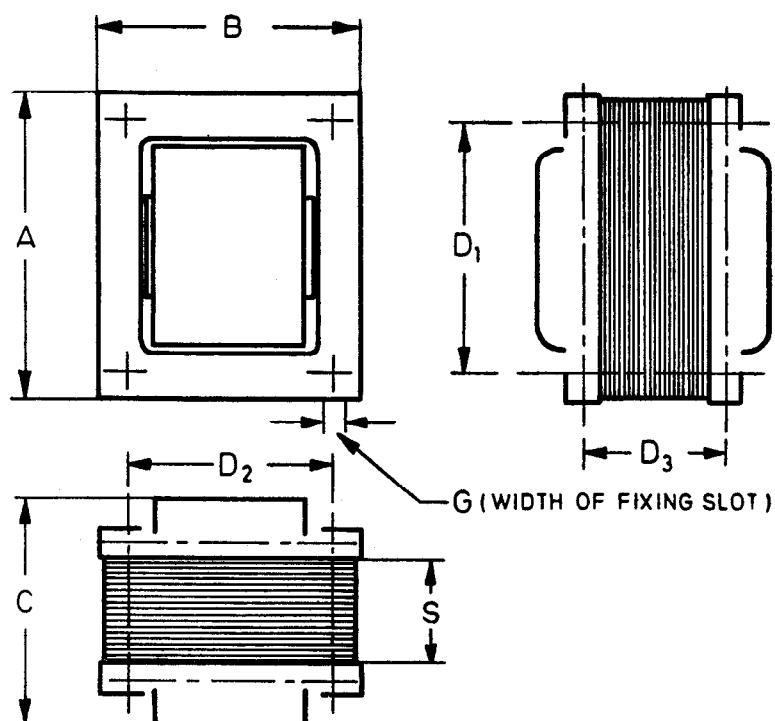


FIG. 1 UNIVERSAL MOUNTING STYLE FOR LAMINATION YEI 1-14 to YEI 1-50

EXPLANATORY NOTE

The object of this series of Indian Standards is to standardize the outline dimensions of transformers and inductors for use in telecommunication and electronic equipment. This part of the series covers transformers and inductors using YEI-1 laminations built for the three most commonly used forms of mounting styles given in the following three sections:

Section 1 Universal Mounting

Section 2 U-clamp mounting

Section 3 Printed wiring board mounting

This standard is based without any technical change, on IEC document 51(CO)249, 'Draft specification for outline dimensions of transformers and inductors for use in telecommunication and electronic equipment: Part 1 Transformers and inductors using YEI-1 laminations,' issued by the International Electrotechnical Commission (IEC).